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**REMARKS**

Claims 1-29 and 28-45 are all the claims pending in the application. Claims 1-29 stand rejected on prior art grounds. Claims 30-37 are cancelled herein without prejudice or disclaimer. Applicants respectfully traverse these rejections based on the following discussion.

**I. Election Requirement**

The Applicants elect to prosecute without traverse claims 1-29 (Group I claims). The Applicants reserve the right to file a divisional application for the non-elected claims (claims 30-37 (Group II claims)) at a later date. Based on the restriction requirement, the inventorship for the Group I claims has changed. However, all claims (Group I and Group II claims) are commonly owned by the assignee, International Business Machines. Under the provisions of 37 CFR §1.48(b), the following individuals are no longer inventors for the invention being claimed (claims 1-29 and 38-45): Sanjay Hegde. Submitted hereto is an Amendment of Inventorship to remove Sanjay Hegde as an inventor.

**II. The Prior Art Rejections**

Claims 1-3, 5-7, 9-14, 16-21, and 23-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada (U.S. Patent No. 6,930,762). Claims 14, 8, 15, 22, and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada in view of Conboy et al. (U.S. Patent No. 6,457,587), hereinafter referred to as "Conboy". Applicants respectfully traverse these rejections based on the following discussion.

Yamada teaches an exposure apparatus has a mask stage (9), a prealignment device (7)

10/711,079

14

which prealigns a mask (1) to be transferred to the stage (9), and a manipulating mechanism (10) which transports a master or exchanges two masters between the stage (9) and prealignment device (7). A master transport apparatus (30) includes a mask transport mechanism (8) which holds the mask (1) with holding portions (8a, 8b) that can hold at least two masks (1) and transports the master (1), and a controller (11) which controls the transport mechanism (8). The controller (11) controls the transport mechanism (8) such that, when a mask (1) that should be used in a first turn for exposure is to be mounted on the stage (9), a mask (1) to be used in a second turn is provided to the prealignment device (7), and a mask (1) to be used in a third turn is held by the holding portion (8a, 8b).

Conboy teaches that reticles are selected for use in a wafer processing system based on the wafer-processing recipe and on the level of degradation exhibited by the reticle after multiple exposures to light and constant physical handling. In an example embodiment of an integrated reticle sorter and stocker, a scanner identifies the reticle and gathers dimensional data on each reticle. A sorter sorts reticles within reticle pods according to the processing recipe and stores the pods within a storage location in the stocker. A computer arrangement then records information from the scanner and the sorter and assesses whether any of the reticles has degraded beyond an acceptable level of usage.

The claimed invention, as provided in amended independent claims 1, 9, 16, and 23 contain features, which are patentably distinguishable from the prior art references of record. Specifically, claims 1 and 23 recite, in part, “...providing a first prioritized list of the auxiliary equipment to load on said at least one processing tool based on a list of said auxiliary equipment absent from said at least one processing tool: providing a second prioritized list of said auxiliary

equipment to remove from said at least one processing tool....” Similarly, claim 9 recites, in part, “...providing a first prioritized list of auxiliary equipment to load on said processing tool based on a list of said auxiliary equipment absent from said at least one processing tool; providing a second prioritized list of said auxiliary equipment to remove from said processing tool....” Likewise, claim 16 recites, in part, “...wherein said controller is adapted to (i) provide a first prioritized list of the auxiliary equipment to load on said at least one processing tool based on a list of said auxiliary equipment absent from said at least one processing tool; and (ii) provide a second prioritized list of said auxiliary equipment to remove from said at least one processing tool.” These features are neither taught nor suggested in the prior art of record. Furthermore, newly added claims 38-45 recite additional features not taught or suggested in the prior art of record.

As for the Office Action’s argument that Yamada teaches the Applicants’ claimed language of “determining from characteristics associated with said processing tool and said plurality of workpieces, an order of arrival of said auxiliary equipment to arrive at said processing tool,” the Applicants respectfully disagree. Yamada’s column 6, lines 47-55 refers to the reticles being “registered in the order... with which they should be used,” but Yamada’s column 6, lines 63 through column 7 line 9 says that this sequencing is exogenous to the invention (“.. input from the host controller... or console...”). Consequently, Yamada does not *determine* “an order of arrival of said auxiliary equipment.” Accordingly, Yamada executes according to the sequence provided by an external source (host system or console). Further, such ordering applies only to the reticles which already exist in the reticle library. In contrast, the Applicants’ claimed invention determines which reticles to send to the tool’s reticle library.

The Office Action admits that "Yamada does not teach modeling based on future events" and references Conboy to fill in this gap. However, column 8 lines 51-55 of Conboy states that "the reticle degradation module has the capability of calculating the time and rate of approach to the failure point of the reticle based on the reticle's current condition and the upcoming wafer lots that will be processed." While this may be applicable in terms of inspecting auxiliary equipment in a manufacturing process, however this would take a non-obvious jump to get from Conboy to the Applicants' projection of work-in-process and apply this to the planning of reticle movements to/from the tool without the degradation/inspection/clean context (see Applicants' Figure 4, blocks 50-56). Furthermore, neither Conboy nor Yamada suggest the totality of "modeling future events related to said processing tool based on work-in-process profiles generated from an iteration of said method" as recited in Applicants' claims.

Furthermore, the Applicants respectfully suggest that the Office Action (page 4) is mistaken in asserting that Yamada does "performing multiple jobs in priority series, and prepositioning the masks based on the job requirements so that they arrive at the correct time." There is no language in Yamada which remotely teaches or suggests these concepts.

Insofar as references may be combined to teach a particular invention, and the proposed combination of Yamada and Conboy, case law establishes that, before any prior-art references may be validly combined for use in a prior-art 35 U.S.C. § 103(a) rejection, the individual references themselves or corresponding prior art must suggest that they be combined. However, there is nothing in each of the references that suggests such a motivation to combine as suggested in the Office Action. In fact, had such a motivation been anticipated in any of the prior art references, then surely some discussion regarding alternative embodiments or manners of

combination would have been suggested or at least inferred in any of the prior art references. In fact, no suggestion for combination is provided in any of the prior art references.

As evidence for the above, the Applicants note that even the U.S. Patent & Trademark Office has designated Yamada and Conboy as non-analogous art. First, Yamada has been classified in U.S. classes 355/75; 700/121; 700/213; 700/228; 700/245; 414/222.09; and 414/226.05 with a field of search in classes 355/53, 72, 75; 414/222.01, 222.09, 226.05; 700/121, 213, 228, and 245. Conversely, Conboy has been classified in U.S. classes 209/630; 209/583; 209/586; and 438/308 with a field of search in classes 209/577, 583; 209/630, 586; 438/908, and 487. Thus, there are no overlapping classes for Yamada and Conboy. Therefore, if the USPTO with its vast repository of prior art references available for analysis has determined that Yamada and Conboy are not classified in the same art field, and therefore unlikely to be combined with one another, then one of ordinary skill in the art would hardly be likely to combine Yamada with Conboy in the manner suggested in the Office Action. Indeed, such a combination is unobvious.

In In re Semaker, 217 U.S.P.Q. 1, 6 (C.A.F.C. 1983), the court stated: “[P]rior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings.” Furthermore, the court in Uniroval, Inc. v. Rudkin-Wiley Corp., 5 U.S.P.Q.2d 1434 (C.A.F.C. 1988), stated, “[w]here prior-art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself. . . . Something in the prior art must suggest the desirability and thus the obviousness of making the combination.” There is nothing in the prior art that refers to a suggestion or desirability of making the proposed combination. Accordingly,

the rejection under 35 U.S.C. §103(a) is *prima facie* defective.

In the present application, the reason given to support the proposed combination is improper, and is not sufficient to selectively and gratuitously substitute parts of one reference for a part of another reference in order to try to meet, but failing nonetheless, the Applicants' novel claimed invention. Moreover, there is nothing in the prior art references themselves, namely Yamada and Conboy, which suggests a motivation to combine elements from each reference in a manner consistent with the suggestion by the Office Action. Furthermore, the claimed invention meets the above-cited tests for obviousness by including embodiments such as "providing a first prioritized list of the auxiliary equipment to load on said at least one processing tool based on a list of said auxiliary equipment absent from said at least one processing tool;" and "providing a second prioritized list of said auxiliary equipment to remove from said at least one processing tool." As such, all of the claims of this application are, therefore, clearly in condition for allowance, and it is respectfully requested that the Examiner pass these claims to allowance and issue.

As declared by the Federal Circuit:

In proceedings before the U.S. Patent and Trademark Office, the Examiner bears the burden of establishing a *prima facie* case of obviousness based upon the prior art. The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fritch, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992) citing In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

Here, the Examiner has not met the burden of establishing a *prima facie* case of obviousness. It is clear that, not only does Yamada fail to disclose all of the elements of the claims of the Applicants' claimed invention, but also, if combined with Conboy, fails to disclose

these elements as well. The unique elements of the claimed invention are clearly an advance over the prior art.

The Federal Circuit also went on to state:

The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. . . . Here the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. Fritch at 1784-85, citing In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Here, there is no suggestion that Yamada, alone, or in combination with Conboy teaches a structure and method containing all of the limitations of the claimed invention. Consequently, there is absent the "suggestion" or "objective teaching" that would have to be made before there could be established the legally requisite "prima facie case of obviousness." In view of the foregoing, the Applicants respectfully submit that the collective cited prior art do not teach or suggest the features defined by amended independent claims 1, 9, 16, and 23 and as such, claims 1, 9, 16, and 23 are patentable over Yamada, alone, or in combination with Conboy. Further, dependent claims 2-8, 10-15, 17-22, 24-29, and 38-45 are similarly patentable over Yamada, alone, or in combination with Conboy, not only by virtue of their dependency from patentable independent claims, respectively, but also by virtue of the additional features of the invention they define. Thus, the Applicants respectfully request that these rejections be reconsidered and withdrawn.

Moreover, the Applicants note that all claims are properly supported in the specification

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and accompanying drawings. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.

### III. Formal Matters and Conclusion

With respect to the rejections to the claims, the claims have been amended, above, to overcome these rejections. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections to the claims.

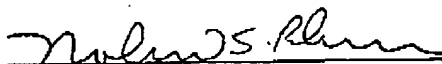
In view of the foregoing, Applicants submit that claims 1-29 and 38-45, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0456.

Respectfully submitted,

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10/711,079

21